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Mental imagery for whitewater rafters

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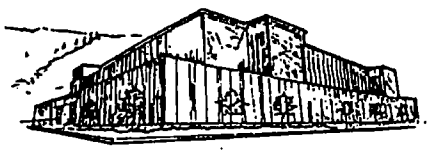

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Mental Imagery for Whitewater Rafters

A Professional Paper

by

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Mental Imagery for Whitewater Rafters

Director: Dr. Clarence E. Burns CEB

The purpose of this project is to introduce the skill of mental imagery to whitewater rafters. The project defines mental imagery and provides rationale for its usefulness in whitewater situations. The project culminates in development of a manual that can be distributed directly to whitewater rafting guides. The manual includes an education component that describes mental imagery followed by a section devoted to increasing imagery skill levels. Imagery lessons are included for the reader to employ. Through anecdotal evidence collected from students participating in a whitewater workshop, it was found that imagery is indeed being used but exactly how imagery is being used may be in question. Further scientific research should be conducted to understand issues of perspective, vividness, and controllability and how these aspects of imagery improve performance in whitewater situations.

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Chapter One

Introduction

> Running a river is one of the few remaining ways to compete against nature rather than against others, or against society. It's a wonderful change, a wonderful struggle, because the river lets you know immediately whether you've won or lost. In the battles of day-to-day life, one can't always recognize one's wins and losses. But the successful run of each rapid is a clear-cut victory all in itself, and the run of a whole river reiterates all of the victories along the way.
>
> Veteran river guide, Gaylord Stavely
> (as quoted in Kuhne, 1995, p. 9)

While athletic competition is characterized by wins and losses, recreational endeavors such as river running are not traditionally viewed in the same competitive light. The above passage, however, describes river running as if it were an athletic event, slating the river runner against the river. Considering that an athlete prepares himself for performance on the playing field, it may be argued that a whitewater rafting guide should prepare himself in similar ways to ensure a successful run of the river (Orlick 1980). Much like an athlete, a guide must mentally and physically prepare for performance. Each river tour, according to this scenario, can be considered a contest or competition.

1.1 Rafting Guide Licensure

To become a successful whitewater rafting guide, an individual must possess a variety of skills. The customary skills needed for guiding successful multi-day tours include understanding rivers, river maneuvering, familiarity with equipment and gear, maintaining safety and conducting rescues (Bennett, 1996;

Johnson, 1994; Kuhne, 1995). According to Wayne Fairchild, owner of Lewis & Clark Trail Adventures in Missoula, Montana, the most common method in preparing to be a whitewater rafting guide is taking classes from whitewater outfitters (Fairchild, personal communication, February, 27, 2004). These outfitter's classes can range from one day to multi-day sessions in which the students engage in practical application of all river running skills.

After successful completion of a whitewater training workshop, students qualify to apply their skills in a commercial setting. Chris Caraithers, training specialist for the Western Region Outward Bound School, states that determinants of placement with a hiring outfitter are variable and are based on subjective evaluations of each guides skill level (C. Caraithers, personal communication, March, 26, 2004). Just like a coach choosing his starters, an outfitter will choose the best performers and construct his staff accordingly (W. Fairchild, personal communication, March 5, 2004). In other words, if a guide can perform the customary skills at a high level, they are more likely to get hired. Presumably, the course content must be sufficiently mastered to confidently and safely guide clients on whitewater rafting expeditions.

In the state of Montana, licensure of whitewater rafting guides or outfitters of whitewater expeditions is not required. According to Charlie Sperry, licensing specialist for Montana Fish, Wildlife & Parks, only fishing outfitters and fishing guides are regulated by the state (C. Sperry, personal communication, March 24, 2004). Considering this, outfitters offering whitewater classes in Montana cannot offer any official licensure as an outcome of participation.

Licensure of whitewater guides and outfitters is legislated differently in other states. In the state of Idaho and New York, for example, licensure is required to guide commercial rafting excursions. To become eligible for licensure in Idaho, the guide is required to be certified in first-aid and CPR consistent to the standards set by the American Red Cross (State of Idaho Outfitters & Guides Licensing Board, 2004) Also, a requisite number of training runs must be completed. In New York, policies are more stringent. In addition to first-aid and CPR, a certification in water safety instruction is required. The last step for licensure includes a written exam (New York State, 2004).

Although each state legislates guide licensure differently, the American Canoe Association (ACA) does offer certification for those students completing the program (American Canoe Association, 2004). The ACA appears to be the only organization that certifies rafting guides in the USA. The presumption is that participating in ACA courses will increase the participant's skill levels. Federal law does not require certification, but select outfitters may interpret ACA courses as meeting necessary qualifications. Therefore, becoming certified by the ACA may be construed as a way to become more marketable as a river guide.

The governing body for rafting is the International Rafting Federation. This group outlines minimum skill levels for guides and supports other organizations connected to whitewater rafting. While the this organization may claim official status, the information provided on their website fails to address the need or desire to legislate licensure, certification or any kind of official preparation.

As the review of popular rafting literature indicates, licensure and/or certification is not the issue it is in other professions. The established standard then, official or unofficial, for becoming a whitewater rafting guide appears to be the possession of 1st Aid/CPR certification and the acquisition of customary skills related to river rafting. It isn't surprising then that guide training and workshops are typically designed to help prospective guides develop the customary skills through practice (W. Fairchild, Lewis & Clark Trail Adventures, February 27, 2004; Ryan Gates, North Country Whitewater Rafting, March, 26,2004; Deb Moorvac, 10,000 Waves, March 26, 2004; Chris Caraithers, Outward Bound West, March, 26, 2004).

1.2 Rafting Guide Preparation

Practice is a term that can be associated with preparing for athletic competition. According to Fischman and Oxendine (1999), most writers agree that the single most important factor in the control of learning is practice, the repeated performance of a skill so as to become proficient. When considering the development of expertise, it is difficult to ignore the growing body of literature, in the sport domain and outside of it, that addresses the role of practice, and the conditions of practice, that lead to high levels of performance (Singer & Janelle, 1999; Lee, Chamberlain & Hodges, 2001). It seems that outfitters are correct when it comes to promoting guide's physical practice to become more proficient on rivers. The outfitters provide practice to promote learning of skills. Learning can be defined as an improvement in skill that is brought about as a function of

practice (Magill, 1998b; Schmidt & Lee, 1999). This notion helps one understand the outfitter's motivation to promote practice.

It is the premise of this paper that a rafting guide should prepare himself as an athlete. In the context of athletic competition, a safe tour is a win and an unsafe tour is a loss. Weinberg and Gould (1999) state that in any sport a player's success (or failure) results from a combination of physical (e.g., strength, speed, balance, coordination) and mental (e.g., concentration, confidence, anxiety management) abilities. This assumption depends not only physical skills but mental skills as well. While there is evidence that there is no lack of physical preparation for success on rivers, interviews conducted with several outfitters suggest that psychological preparation is absent from river guide training regimes (W. Fairchild, personal communication, February, 27, 2004; C. Caraithers, personal communication, March 26, 2004; D. Moorvac, personal communication, March 26, 2004).

Psychological preparation for athletic performance has long been recognized as a key for success. For example, in early Greek and Asian cultures the interdependence of mind and body was not only acknowledged but emphasized as central to both performance and personal development (Williams & Straub, 2001). Contemporary studies undeniably conclude that psychological skills can assist athletes in getting the most out of their physical talent (Mahoney & Avener, 1977; Smith & Christensen, 1995; Smith, Schutz, Smoll, Ptacek, 1995; Thelwell & Greenlees, 2001; Rahahleh & Al-Khayyat, 2001; Thelwell & Maynard, 2003).

1.3 Psychological Skill Training for Rafting Guides

Psychological skill training has been researched and found to benefit athletes of various disciplines (Wild, 2002; Jones, Mace, Bray, MacRae, & Stockbridge, 2002; Smith, Collins, & Holmes, 2003). Greenspan and Feltz (1989) reviewed 23 published studies of the effectiveness of various psychological interventions, including imagery, in competitive settings including skiing, boxing, golf, karate, tennis, figure skating, volleyball, gymnastics, and basketball. They concluded that educationally based psychological interventions effectively improve competitive performance in collegiate and adult athletes. Gould (2002) suggests that psychology of excellence is used in other domains outside of athletics such as theatre, dance and business.

With so much support for the importance of psychological skill training (PST) in performance enhancement, one would assume the same standard would exist in the training of guides. Weinberg and Gould (1999), however, offer explanations as to why PST isn't used. They point out that lack of knowledge is a primary reason why psychological skill training is not included in the training of athletes in general. For example, coaches will often direct their athletes to "just relax" before an important competition. This is not easily done without proper relaxation skills. The coach's lack of knowledge may lead to improper relaxation techniques. A similar example can be suggested for whitewater situations. A whitewater trainer may suggest that one "visualize" their route through a rapid. Without practice or proper instruction on how to visualize, one may not use it to its optimum advantage.

Psychological skill training is also absent because of time restrictions (Weinberg & Gould, 1999; Weinberg & Williams, 2001). Weinberg and Gould (1999) point out that coaches say their athletes barely have enough time to practice physical skills, much less mental ones. Trainers for whitewater workshops, including Joe Petrilli, Outdoor Program Manager for the University of Montana, expressed similar limitations (W. Fairchild, personal communication, February 27, 2004; J. Petrilli, personal communication, March 26, 2004). Agenda items in guide training are numerous and physically grueling. Considering this, long days of training may not leave time to complete psychologically based curriculum.

It is not difficult to understand that lack of knowledge of psychological skill training and the time to implement such lessons pose barriers for inclusion in guide training. The proposed project will elevate the importance of psychological skill training and specifically how mental imagery will improve a guide's chances for success in running rapids.

While psychological skills training is absent from the literature of whitewater guiding, there has been casual mention of the use of visualization (mental imagery) in some literature. Bennett (1996) suggests that before running a rapid, one should, "...run it mentally first." He goes further by instructing the reader to, " imagine each move you'll make as your raft descends the rapid from top to bottom." Johnson (1994) also makes reference to visualization in his section on scouting rapids. He explains, "When you have a particular segment of the route identified, walk upstream a bit and visualize its appearance from above."

While the word "visualize" is used, there is no attempt to explain why visualization or mental imagery should be used or how it will increase the chances of a successful run. These references support that the notion of visualization is important when preparing for running rapids. While these remarks suggest that imagery is a common technique, occasional commentary is hardly enough to instruct the whitewater guide on how to use mental imagery. The general nature of these references also suggests that river guides may be in need for more specific instruction in this area. Vealey & Greenleaf (2001) put it simply by stating that evidence supports the effectiveness of imagery in improving sport performance, but only through controlled, systematic practice.

The guide's performance in rafting is directly related to the extreme consequences of running rapids. The following table explains the different classification of rapids:

> **Class I**: moving water with maybe a few riffles and small waves. Few or no obstructions. Most flatwater rivers are in this class.
>
> **Class II**: easy rapids with waves up to 3 feet high, and wide, clear channels that are obvious without scouting. Some maneuvering is required, but nothing really tricky or difficult.
>
> **Class III**: rapids with high, irregular waves often capable of swamping an open canoe or a kayak without a spray cover. Narrow passages that often require complex

maneuvering. Rapids of this magnitude should be scouted from the shore first to determine the best route through.

Class IV: long, difficult rapids with constricted passages that can require precise maneuvering in very turbulent waters. Scouting from shore is essential, and rescue may be difficult. Accidents from class IV water present a serious hazard to life.

Class V: extremely difficult, long, and very violent rapids with highly congested routes that must be scouted from shore before attempting. In the event of mishap, there could be a distinct hazard to life. All boaters attempting a Class V must be well versed in all aspects of self-rescue, and a rescue party should be available at the foot of the rapids.

Class VI: difficulties of Class V carried to the extreme with all precautions taken. Nearly impossible and extremely dangerous. (as taken from Johnson, 1994, pg. 23-24)

As is obvious in the classification of rapids a skill called "scouting" is necessary for running rivers. Bennet (1994) states that shoreline scouting is the best way to go into any rapid. Scouting rapids is a common practice to help river runners plan a course to ensure a successful run (Johnson, 1996; White & Hardy, 1998). Mental imagery is a simulation and a sure way to enhance the scouting experience.

Through imagery, the guide will simulate a successful, safe route in their mind, which aids in planning moves. Slalom canoeists use a similar strategy for their performance. MacIntyre, Moran, & Jennings (2002) state that in slalom canoeing, a competitor must perform a series of turns to negotiate the slalom course and, with no practice on the course before the race, participants must decide before-hand the precise strokes to use and where to use them. The task demands of canoe-slalom imply that imagery is useful for planning performance. In fact, evidence to support this notion has been gathered in interviews with canoe slalomists in which they claimed to apply imagery to rehearse paddling the canoe-slalom course (Moran & MacIntyre, 1998; White & Hardy, 1998). Trial runs are generally not possible in wilderness situations and the consequences of an unsuccessful run can include death. Considering this, it would behoove the guide to image the proper route for a successful run.

1.4 Project Design

With the permission of Dr. Lewis Curry, director of sport psychology services at the University of Montana, this project will replicate the same model used for the class HHP 270- Principles of Optimal Performance offered by the department of Health and Human Performance. The purpose of this course is to provide freshman and sophomore student-athletes with hands-on psychological tools for enhanced performance in sport and well being in life.

Based on the University of Montana (UM) model, the proposed project will introduce mental imagery and provide cognitive techniques for its application in running rapids. This model is used for implementing psychological skill

training for the training of athletes. In this model there are three phases in the structure of the program (Weinberg & Gould, 1999). The first phase is the education. In this phase, participants quickly recognize how important it is to acquire PST and how the skills affect performance. This will be achieved through writing a general summary of PST and specifically how mental imagery can enhance the scouting experience. The next phase, acquisition phase, focuses on strategies and techniques for learning the mental imagery. It is here that the program will tailor specific strategies of mental imagery towards river running. The last phase, practice phase, the guide will be encouraged to practice mental imagery as to automate the skill for "on demand" uses.

The final product of this proposed project will be a stand-alone addendum containing mental imagery training curriculum for river guides. The final product will assist river guides in applying principles of mental imagery for the purpose of successful running of rapids. Imagery is simply a mental technique that programs the mind and body to respond optimally. By using imagery as a mental training tool, athletes have the capacity to see and believe, which gives them the confidence and focus to perform successfully (Vealey & Greenleaf, 2001).

1.5 Purpose

The purpose of this project is to introduce mental imagery training as a supplement to traditional training manuals for river guides. This paper will provide outfitters and whitewater rafting guides information that will 1) educate the reader on what mental imagery is and how it is used to foster success and 2) increase the perceived level of importance in its use in guide training. Ultimately,

the document will increase awareness of the uses of mental imagery and provide the guide tools to increase performance of scouting and running rapids.

1.6 Significance

Research clearly delineates the correlation between improved sport performance and psychological skill training (Orlick & Partington, 1988; Suinn, 1993; Wild, 2002; Jones, Mace, Bray, MacRae, Stockbridge, 2002). More specifically, the literature supports the role of mental imagery in affecting outcomes (White & Hardy, 1998; MacIntyre, Moran, & Jennings, 2002). This paper represents a pioneer effort to add whitewater rafting as a performance entity, which can be enhanced by the application of mental imagery techniques. Though, mental imagery (visualization) is mentioned casually in whitewater resources (Bennett, 1996; Johnson, 1994), the literature is void of any formal attempt to apply mental imagery techniques in the training of whitewater rafting guides. The addition of this project to whitewater training manuals will advance the body of knowledge available to whitewater enthusiasts. This will open up additional avenues to exploring the application of mental imagery training and other PST to other recreational, though physically and mentally demanding, pursuits.

1.7 Limitations

With the exception of psychological skill training, information regarding whitewater rafting guide preparation is found in non-academic resources. In addition to popular rafting literature, the bulk of information regarding whitewater rafting guide professional preparation is a direct outcome of interviews with

regional whitewater rafting experts. The information gained then, via personal communications is limited by the subjective views and experiences of the interviewees.

In some states licensure is required for guiding clients in wilderness settings. Certification may also be recommended. This document can be used as supplement to resources used for credentialing but cannot be viewed as a "stand alone" document for such instances. This document is meant to enhance the current literature without proclaiming any official status.

1.8 Definition of Terms

Anxiety – a negative emotional state characterized by nervousness, worry, and apprehension and associated with activation or arousal of the body (Weinberg & Gould, 1999).

Self-Confidence – The belief that you can successfully perform a desired behavior (Weinberg & Gould, 1999).

Psychological Skill Training – Systematic and consistent practice of mental or psychological skills. Psychological skills refer to things such as focusing concentration, enhancing confidence and improving imagery. (Weinberg & Gould, 1999).

Performance – The act or style of performing a work or role before an audience (Soukhanov, 1992).

Mental Imagery – A form of simulation similar to a real sensory experience but it occurs in the mind (Weinberg & Gould, 1999).

River Running – The art of navigating and maneuvering watercraft through hazards such as whitewater (Myers, 2004).

Scouting Rapids – Viewing the hazards and characteristics of rapids previous to running. The time to plan routes for successful navigation (Myers. 2004).

Customary Skills – The skills needed to be a successful river runner (Myers, 2004).

External Imagery – In external imagery you view yourself from the perspective of an external observer. It is as if you are watching yourself in the movies or on videotape (Weinberg & Gould, 1999).

Internal Imagery – Internal imagery refers to imagining the execution of a skill from your own vantage point. As if you had a camera on your head, you see only what you would see if you actually executed the particular skill (Weinberg & Gould, 1999).

Chapter Two

Review of Literature

2.1 Typical Handbooks for River Guides

Various types of resources exist for those interested in becoming river guides. To learn river running skills, there are books and Internet sites that provide information to assist the guide. Books on general river running introduce the many facets of river running (Huser, 1975; Bennett, 1996; Kuhne, 1995; Johnson, 1994). Topics covered in the book by Johnson include understanding rivers, maneuvering on the river, paddle rafting, equipment and gear, safety, and rescue and recoveries. These books serve as a basic resource for those beginning a career as a river guide. Bechdel and Ray (1985) describe in *River Rescue* operations not covered in basic river running guides. These chapters include self-rescue, rescue by rope, boat-based rescue, entrapments and extrications, vertical rescue and organization for rescue. The books by Huser and Bechdel & Ray typify the types of resources available at the public library or bookstore. Further resources can be gathered on the Internet but still carry the same flair as the one's mentioned above. To seek even further, one may find "home-made" handbooks offered by outfitters that use these guides for their own staff training. One such handbook obtained from Lewis & Clark Trail Adventures (LCTA) resembles an abridged version of the Johnson (1994) and Bechdel & Ray (1985) books. LCTA has reviewed the material and has chosen subjects deemed most crucial to the guide's success. These resources are not readily available and some consider that

information inaccessible unless one takes their class. None of these sources mention of performance psychology concepts.

Overall, numerous resources can be found in bookstores, libraries and on the Internet in the areas of river running. A document that puts all of these facets together while including concepts of performance psychology, such as mental imagery, does not exist.

2.2 Rafting Guide Licensure

Through an interview conducted with Charlie Sperry from Fish, Wildlife and Parks in the state of Montana, it was discovered that river guides, including whitewater outfitters, do not need licensure to practice their craft commercially (C. Sperry, personal communication, March, 24, 2004) He noted that customers wishing to hire an outfitter for whitewater rafting might base their selection of an outfitter should confirm that they have liability insurance. No other official document exists in support of their ability to safely guide clients down rivers.

Idaho and New York do require licensure of whitewater guides (State of Idaho Outfitters & Guides Licensing Board, 2004; New York State, 2004). These states have legislatures that have required this. In Idaho, one needs to be certified in first-aid and CPR and are required to complete training runs under the direction of a licensed outfitter. Once a guide has fulfilled these requirements, a fee of seventy-five dollars is the last condition of licensure. In New York, the requirements are more stringent. In addition to first-aid and CPR, a certification in water safety instruction is required. There is also a written test and fee of one hundred twenty dollars required to get a license.

To guide whitewater overseas, there seems to be very little regulation of licensure. According to the International Whitewater Federation, first-aid, CPR and the acquisition of customary skills are required. While the name of this organization may be interpreted as a governing body overlooking those that are involved in commercially running rivers, the organizations connected to the IWF focus primarily in the political ramifications of protecting public access to wildlands.

2.3 Psychological Skills Training for Athletes

Several recent studies have found that psychological skills can assist athletes is getting the most out of their physical talent (Mahoney & Avener, 1977; Smith & Christensen, 1995; Smith, Schutz, Smoll, Ptacek, 1995; Thelwell & Greenlees, 2001; Rahahleh & Al-Khayyat, 2001; Thelwell & Maynard, 2003). Through extensive research, the following studies found that PST increased performance in athletics. Wild (2002) found that PST was able to lower stress levels and raise levels of self-efficacy in technical climbing. Smith, Collins, & Holmes (2003) found that mental practice enhanced strength performance. Rahahleh & Al-Khayyat (2001) found that the use of mental training enhanced learning of the tennis serve. These are current examples of the research being done in the PST realm.

Psychological skills training (PST) refers to systematic and consistent practice of mental or psychological skills (Weinberg & Gould, 1999). According to Fischman and Oxendine (1999), the single most important factor in the control of learning is practice, the repeated performance of a skill so as to become

proficient. Most comprehensive mental training programs stress the development of psychological skills and techniques such as anxiety management, imagery, goal setting, concentration, self-talk, thought stopping, routines, and confidence (just to name a few) (Weinberg & Williams, 2001). Similar to physical skills, psychological skills such as maintaining and focusing concentrations, regulating arousal levels, enhancing confidence, and maintaining motivation also need to be systematically practiced (Weinberg & Gould, 1999).

Various researchers have set forth guidelines for implementing a program of psychological skills training most often utilizing cognitive-behavioral interventions in goal setting, imagery, and regulating arousal and/or affect (Meyers, Whelan, & Murphy, 1996; Vealey, 1994). Effectiveness of psychological skills training has generally been supported across sports and approaches (Meyers, Whelan, & Murphy, Vealey, 1994, Vealey & Garner-Holman, 1998; Weinberg & Williams, 2001). Through interviews of outfitters, it was found that psychological skill training is not being included in the training of their staff.

There are two possible reasons associated with the failure to use psychological skill training. They are lack of knowledge and lack of time. Weinberg and Gould (1999) explain lack of knowledge as follows:

> Many people don't really understand how to teach or practice PST skills. For example, some coaches teach concentration by shouting, "Concentrate out there!" or "Will you get your mind on what you're supposed to be

> doing?" The implicit assumption is that the player knows how to concentrate but is just not doing it...Unfortunately, many of them have not had access to techniques for teaching and learning psychological skills...We are learning that such advice needs action-oriented approaches and plans for improving mental skills in order to enhance performance. (pg. 225)

A study of junior tennis coaches found that lack of time was given as the most important roadblock to teaching mental skills to their players (Gould, Medbery, Damarjian, & Lauer, 1999). People reason that they lost a particular game or competition because "I wasn't up for the game today," or "I just couldn't seem to concentrate." One would think that if coaches thought their teams lost because of poor concentration, they would make time to practice concentration skills. If one believes that mental skills are important and one knows how to practice them, one will find time for them (Weinberg & Gould, 2001).

Sport psychology researchers have been working hard to establish a database concerning the effectiveness of these psychological interventions in improving performance (Weinberg & Williams, 1999). Greenspan and Feltz (1989) reviewed approximately 20 of 23 published studies that tested the effectiveness of various psychological interventions in competitive sport settings, including basketball, volleyball, gymnastics, baseball, tennis, and figure skating. Results revealed positive performance effects for the intervention groups in 17 of the 20 studies reviewed (Weinberg & Williams, 1999). Orlick (1986) provides a

number of case studies of Olympic athletes who systematically employed a mental training program. The athletes report that their mental training and discipline were a critical component of their success.

The two factors discussed previously will be suggested as the reasons that outfitters have not implemented PST in their training regimens. Outfitters do such an excellent job in applying physical lessons in guide training but psychological skills are overlooked. It will be suggested that it is because lack of knowledge on the part of the outfitters or simply lack of time.

Although PST programs take many forms to match participants' individual needs, they generally follow a set structure with three distinct phases: education, acquisition, and practice (Weinberg & Gould, 1999). In the education phase participants quickly recognize how important it is to acquire PST and how the skills affect performance. The acquisition phase focuses on strategies and techniques for learning the different psychological skills The practice phase has three primary objectives: (a) to automate skills through over learning; (b) to teach people to systematically integrate psychological skills into their performance situations; and (c) to simulate skills you will want to apply in actual competition.

Through more extensive research, the following studies found that PST increased performance in athletics. Wild (2002) found that PST was able to lower stress levels and raise levels of self-efficacy in technical climbing. Smith, Collins, & Holmes (2003) found that mental practice enhanced strength performance. Rahahleh & Al-Khayyat (2001) found that the use of mental training enhanced

learning of the tennis serve. These are current examples of the research being done in the PST realm.

2.4 Mental Imagery in Athletics

Just like a skier preparing for a big race down the mountain or a slalom canoeist a river guide can mentally prepare before entering a major rapid (Suinn, 1972; 1976; White & Hardy, 1998). Floating through rapids can resemble a slalom run. Rocks and obstacles formed by river currents create hazards that one must maneuver around for safe passage. The degree of difficulty for each rapid may constitute different degrees of urgency while having an effect on confidence. These situations may constitute the need for an imagery session to ensure success. For instance, the International Scale of River Difficulty classifies six different degrees of difficulty. Class I is easy, having few obstructions while Class VI is considered extremely dangerous and only run by experts. While navigation through easy rapids requires little training, maneuvering though Class III, IV, and V requires extensive training and experience (Bennett, 1996). While outfitters agree that there is no doubt that physical skill is necessary, the following review of mental imagery in athletics will propose the need for the acquisition of this skill in increasing the likelihood of a successful run.

Mental imagery gives you a chance to deal with a problem or event in your head before you are confronted with it in the real world (Orlick 1980). Running whitewater rapids can pose problems for guides. Through imagery, the guide can mentally practice a strategy for the upcoming hazards. This mental practice is done in a fashion that competence and success is the final product of

the run through the rapids. The feeling of competence and success helps one achieve self-confidence (Vealey, R., & Greenleaf, C. 2001). This supports the notion that seeing yourself perform well in your mind makes one feel they can perform under adverse circumstances. If one can see oneself successfully navigating a raft through a treacherous run, they are more likely to foresee success and feel more confident taking on the hazard.

Mental imagery can be used by athletes in various ways, such as reducing anxiety, analyzing past performance and are particularly useful for achieving a variety of goals, including transfer to competitive conditions, enhancement of specific correct responses and in some cases, elimination of negative thoughts (Suinn, 1993). The river guide/athlete may choose to use mental imagery for more than just running rapids. Once trained on the intricacies of imagery, the guide can use techniques learned to increase performance in other areas. Elite sport performers have reported further uses of imagery, such as mentally rehearsing race or match strategies to assist goal setting, enhance self-confidence, improve concentration, reduce anxiety, and enhance quality of training (Jones & Hardy, 1990; Orlick & Partington, 1988). Once a guide becomes rises to the elite level, they may find that imagery is a large part of their preparation.

Several factors seem to determine to what extent imagery can improve performance. The nature of the task is one factor (Hall, Schmidt, Durand, & Buckolz, 1994; Weinberg & Gould, 1999). Tasks involving mostly cognitive components, such as decision-making and perception, show the greatest positive benefits from imagery rehearsal (Feltz & Landers, 1983). The performer

practicing mentally "can think about what kinds of things might be tried, the consequences of each action can be predicted to some extent based on previous experiences with similar skills, and the performer can perhaps rule out inappropriate courses of action" (Schmidt, 1982, p. 520) The skill of running whitewater involves making numerous decisions and can be compared to a point guard weaving through defenders. As a point guard making a drive to the basket, there are many obstacles and moves that could be executed. Some moves will prove effective while others may result in a turnover. Consequences of making a wrong move on a river can prove fatal (Bechdel & Ray, 1985). It seems that the nature of running whitewater rapids supports the use of mental imagery.

Skill level of the performer is also a determinant of imagery's effectiveness (Weinberg & Gould, 1999). Experimental evidence shows that imagery significantly helps performance for both novice and experienced performers (Hall, Schmidt, Durand, & Buckolz, 1994), although there are somewhat stronger effects for experienced players (Feltz & Landers, 1983). This research suggests that introducing the skill of imagery to a variety of skill levels is appropriate. What might be expected is that the participants with a higher skill level in running whitewater may benefit the most by imagery's application.

Not everyone has the innate ability to imagine, which is another factor to consider when introducing imagery (Hall, Schmidt, Durand, & Buckolz, 1994; Vealey & Greenleaf, 2001; Weinberg & Gould, 1999). The fact that imagery is more effective when individuals are higher in imagery ability (Goss, Hall, Buckholz, & Fishburne, 1986; Hall, 1985; Isaac, 1992) suggests that if athletes

can improve the vividness and controllability of their images performance may subsequently be improved. While some guides may have initial problems with the ability to image, research has shown that imagery can be learned and enhanced. Orlick and Partington (1988) document that even Olympic athletes did not initially have good control over their imagery, but they perfected their imagery skills through persistent practice.

The imagery perspective an athlete uses facilitates the imagery experience (Vealey & Greenleaf, 2001). Mahoney and Avener (1977) classified imagery as either internal or external. An internal perspective means that athletes see the image from behind their own eyes as if they were inside their bodies, as opposed to an external perspective in which they see the image from outside their bodies a with a video camera (Vealey & Greenleaf, 2001). Research has shown that elite athletes are more likely to practice imagery from an internal perspective as compared to nonelite athletes, who are more likely to practice imagery from an external perspective (Mahoney & Avener, 1977; Orlick & Partington, 1986). Athletes can use whichever perspective they feel most comfortable with at first, but if they have trouble with internal imagery, Vealey and Greenleaf (2001) advocate that they practice to get better at this perspective due to its importance in kinesthetic and response-oriented imagery.

One last factor to consider when implementing mental imagery is to realize that imagery cannot replace physical practice (Vealey & Greenleaf, 2001; Weinberg & Gould, 1999). In fact, a combination of physical and mental practice is not better than physical practice alone within the same time frame if the mental

component takes time away from physical practice (Hird, Landers, Thomas, & Horan, 1991). In essence, imagery needs to be added to your normal physical practice, but it shouldn't replace it (Weinberg & Gould, 1999). However, mental practice improves performance significantly more than no practice at all (Vealey & Greenleaf, 2001).

2.5 Imagery Theories

Factors affecting the effectiveness of focus will now transition to how imagery works. Various theoretical explanations for how imagery facilitates performance have been advanced in the literature (Vealey & Greenleaf, 2001). The psychoneuromuscular theory suggests that similar impulses occur in the brain and muscles when athletes imagine the movements without actually performing them (Vealey & Greenleaf, 2001). Suinn (1972; 1976) monitored the electrical activity in the skiers' leg muscles as they imagined skiing the course and found that the muscular activity changed during their imaginings.

The second explanation of how imagery may facilitate sport performance suggests that imagery may function as a coding system to help athletes acquire or understand movement patterns (Vealey & Greenleaf, 2001). The symbolic learning theory hypothesizes that imagery rehearsal gains are more often due to the opportunity to practice the symbolic elements of a motor task, than to muscle activation itself (Suinn, 1993). Symbolic learning theory was first proposed by Sackett (1934), who stated that imagery enables performers to rehearse the sequence of movements as symbolic components of a task. This theoretical

position has been supported by studies that have demonstrated greater performance improvement through imagery on movement tasks that required cognitive coding as opposed to pure motor tasks (Feltz & Landers, 1983; Hird, Landers, Thomas, & Horan, 1991).

The bioinformational or information processing theory approach examines mental imagery in terms of the brain's information processing mechanisms (Suinn, 1993). When individuals engage in imagery, they activate stimulus characteristics that describe the content of the image for them and response characteristics that describe what their responses are to the stimuli in that situation (Vealey & Greenleaf, 2001).

Sport Psychologists have more recently argued that imagery also works through its developing and refining psychological skills, and the psychological skills hypothesis would predict that imagery can improve concentration, reduce anxiety, and enhance confidence- all important psychological skills for maximizing performance (Weinberg & Gould, 1999).

Research has shown that imagery is effective in optimizing arousal and attention in athletes (Hale & Whitehouse, 1998; Page, Sime, & Nordell, 1999). This attentional-arousal set explanation of how imagery works is not a theory but an intuitive description of the role of imagery in helping athletes to optimize arousal and attention (Vealey & Greenleaf, 2001).

Athletes can employ imagery in many ways to improve both physical and psychological skills (Vealey & Greenleaf, 2001; Weinberg & Gould, 1999). Imagery can be used to aid beginners in learning sport skills by helping to develop

the appropriate mental blueprint of the skill (Feltz & Landers, 1983). Imagery can enhance a variety of skills to improve performance and can facilitate the learning of new techniques and strategies (Weinberg & Gould, 1999).

Athletes usually take either an internal or external perspective for viewing their imagery (Mahoney & Avener, 1977). Weinberg and Gould (1999) describe both as follows:

> Internal imagery refers to imagining the execution of a skill from your own vantage point. As if you had a camera on your head, you see only what you would see if you actually executed the particular skill. (pg. 274)

> In external imagery you view yourself from the perspective of an external observer. It is as if you are watching yourself in the movies or on videotape. (pg. 275)

Research has shown that it is virtually impossible to characterize participants as strictly internal or external imagers because people's images varied considerably, both within and between images (Epstein, 1980; Mumford & Hall, 1985). However, although the research is inconclusive, some evidence suggests that internal imagery might indeed yield better results than external imagery (Weinberg & Gould, 1999). Hale (1982) found that internal imagery produced more electrical activity in the biceps muscle than external imagery did when subjects imagined flexing their arm. This suggests that internal imagery makes it

easier to bring in the kinesthetic sense, feel the movement, and approximate actual performance skills .

Research supported for mental imagery's inclusion for athletic training is direct support for the use of mental imagery as a psychological skill that can increase performance for river guides. White and Hardy (1998) state that slalom canoeists use mental imagery for planning a run through a course. MacIntyre, Moran and Jennings (2002) support this further by stating that the use of imagery is related to canoe slalom performance. Research done in the realm of canoeing may support the use of imagery in whitewater rafting. The two different sports are similar in nature with the difference in boat style representing the most significant difference.

Anecdotal comments on the use of mental imagery to enhance the scouting experience were taken by the author after a Whitewater Workshop offered by the University of Montana. The class HHP 134: Principles of Whitewater Rafting was conducted in Idaho on the Main Salmon River. This workshop included customary skills mentioned earlier. It was the author's intention to practice presenting notions of imagery to potential whitewater guides.

After receiving education on imagery and the differences of external and internal imagery, the students were prompted to use these skills at three scouting locations. Through casual questioning of twenty people, including instructors, it was found that all participants use imagery with twelve using external and eight using internal. Of the eight that used more internal imagery, five were instructors. This may suggest that internal imagery is used by more experienced whitewater

rafters and external is more useful for novice. It will be suggested that scientific research may be warranted in this area to give more insight in the use of imagery in whitewater rafting.

2.6 Project Summary

The proposed project will be designed with these phases kept in mind. The project will include introductory literature to help the guide learn about mental imagery. This will be followed up by activities that will help them acquire the skill. And it will be suggested that guides further practice mental imagery after the initial lessons so instill imagery as a life-long skill.

The model that will be used to present material on mental imagery is one used by the "Principles of Peak Performance" class offered by the University of Montana. The purpose of this course is to provide freshman and sophomore student-athletes with hands-on psychological tools for enhanced performance in sport and well being in life. Curry and Maniar (2003) reported on three studies conducted to determine behavioral and outcome changes consistent to student-athletes participating in this academic course from 1996-1999. Findings supported pre-post enhancement of trait psychological indices by course-taking student-athletes, coach-rated enhanced sport achievement to date by course-taking student-athletes, and positive behavioral change with implementation of cognitive-behavioral homework by course-taking student-athletes. Curry and Maniar (2004) suggest that their teaching emphasis focuses on how imagery can be our most powerful asset in psychological skills preparation in sport. Anecdotal evidence that Curry and Maniar (2004) present from a student that took the class

is as follows: Soccer (female): "I thought that talking about imagery really helped me. I was able to see and realize the benefits that positive imaging can bring. I learned the proper way to visualize in order to make the visualizing process successful and beneficial."

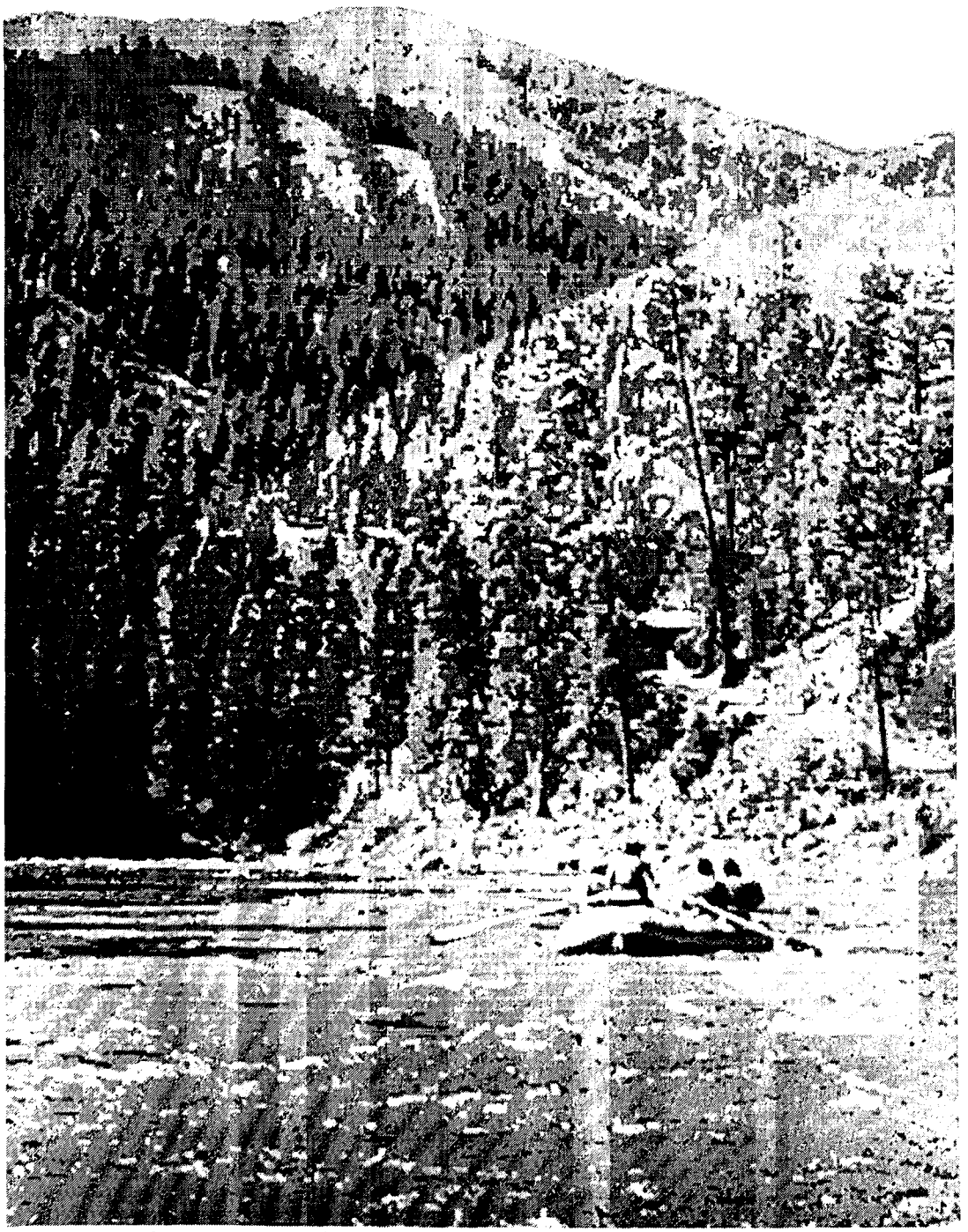

Figure 1. Cruising down the Main Salmon, Idaho, USA.

Chapter Three

Methodology

3.1 Project Format

This project deviates from traditional formats in that no methodology or analysis is suggested. The project culminates in a stand-alone document separate from the introduction body of the paper and easily distributed to interested whitewater rafting guides. The following outline illustrates the format of the project.

I. Introduction

a. Rationale for the project.

i. Why the whitewater rafting guide should become educated on mental imagery's use.

ii. Possible implications of mental imagery's use for performance on the river are introduced and discussed.

II. Education phase

a. What is mental imagery?

i. Imagery is a form of simulation.

ii. Imagery should incorporate as many senses as possible.

b. Does imagery work?

i. Evidence from scientific experiments support the use of mental imagery in learning and performing motor skills.

1. Factors affecting the effectiveness of Imagery

a. Nature of the task

b. Skill level of the performer

c. Imaging ability

d. Using Imagery along with physical practice

c. How imagery works.

i. Theories presented:

1. Psychoneuromuscular Theory

2. Symbolic Learning Theory

3. Bioinformational Theory

d. Types of Imagery.

i. Internal Imagery

ii. External Imagery

1. Whitewater Imagery Video : to be produced.

e. Keys to Effective Imagery.

i. Vividness

ii. Controllability

III. Acquisition phase

a. Imagery evaluation of participants.

i. Sport Imagery Evaluation

b. Imagery lessons in classroom or on shore.

i. Pre-trip lesson

ii. Vividness Exercises

iii. Controllability Exercises

iv. Perspective lesson

v. Guided Imagery on the River

IV. **Summary and Discussion**

a. Recommendations

b. Recommended readings

c. About the Author

d. References

3.2 Needs Assessment

The following describes methods used by the author to assess the need for mental imagery training amongst whitewater rafting guides.

Procedure: In cooperation with the instructors of HHP 134: Fundamentals of Whitewater Rafting (The University of Montana), mental imagery training was incorporated into the class' curriculum. HHP 134 offers potential whitewater rafting guides lessons in customary whitewater rafting skills over a period of 4 days on the Main Salmon River in Idaho. Mental imagery training has never been incorporated in this class.

The training session included students being instructed on the uses of external and internal imagery. The lesson was similar to the perspective lesson included in the imagery manual. Once these concepts were understood, the students were prompted to use both types of imagery in scouting rapids. Post-trip needs assessment questionnaires were distributed to measure the significance of the learning experience. While this research is anecdotal in nature, the findings

suggest that imagery is being used and the lesson may have enhanced its use with this group of people.

Through this assessment it is suggested that further research be conducted to collect more detailed accounts of imagery's use in whitewater situations. Possible questions include how and when are whitewater rafters using imagery. A copy of the questionnaire used is listed in the appendix.

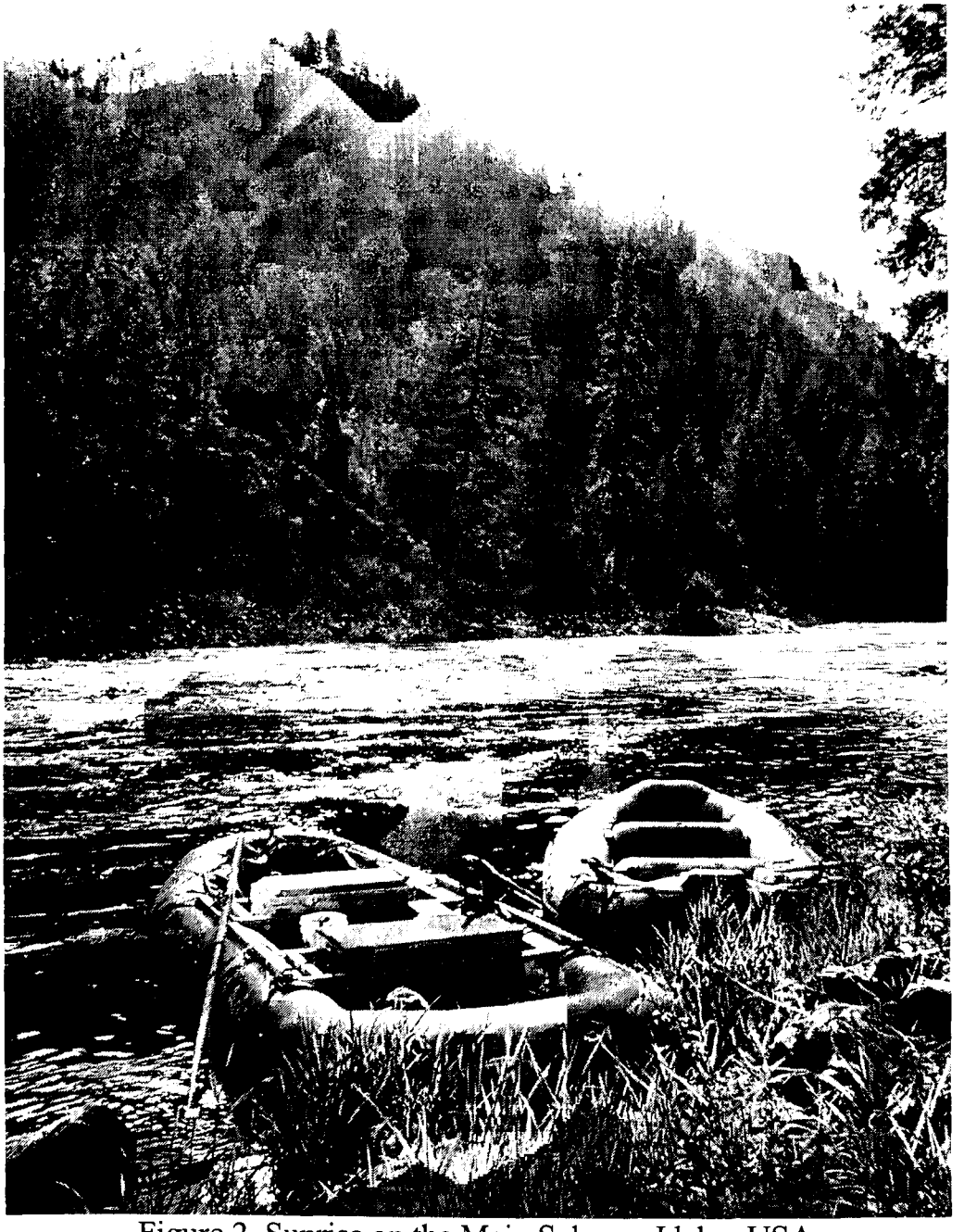

Figure 2. Sunrise on the Main Salmon, Idaho, USA.

Chapter Four

Mental Imagery Manual

4.1 Introduction

As you look over the edge of the cliff, scouting your next rapid, the view is quite ominous. Waves as big as elephants churn and rumble with the same ferocity and violence as a train wreck. The roar of the rapids drowns out the possibility of conversation. Goose bumps crawl up the back of your neck resembling the familiar stripe that rises on an irritated dog. The smell of moist cool air stings your nostrils. Thoughts keep racing in your mind while muscles tense. Will I make it through the rapid? Will the rapid toss me into the blender and spit me out into a lifeless heap? The massive power of nature humbles the most experienced. Danger has a way of eliciting emotions that fuel anxiety. As any river runner knows, a Class V rapid can bring doubt to the minds of the strongest. Butterflies emerge in the stomach of the most skilled. Running extreme rapids is a mental game and it is a game that the guide has a choice to control.

"Going with the flow" is a phrase that is often used in river running. This amounts to understanding that one cannot fight the course of Mother Nature as her fluids gently and violently cruise over, under and through the earth. An experienced river runner knows to challenge the power of the imposing waves is a fight not worth confronting. One must respect this power of nature and attempt to gain an advantage by knowing the characteristics of whitewater. The knowledge and skills to confidently run whitewater and keeping peace with the "river gods" amounts to the wisdom needed to survive in extreme situations.

Knowledge of whitewater is paramount, but it is often insufficient to achieve peace of mind. Doubt and anxiety often disrupt serenity. Questions lurk as the river runner analyzes the challenge and the apparent skill level needed to conquer the wildness of the run. This is when the mind kicks into overdrive. The mind can choose to fight or run with the anxious demons. To fight would entail wielding the sword blessed by positive mental images. The river runner is no longer going with the flow, but fighting for sanity in the heat of the moment, which in the long run will help attain the flow like state. Positive mental imaging is a tool one uses to crush the demons of negativity producing a comfort and confidence to take on the challenge.

The following document will introduce the river runner on the skill of mental imagery. Once this skill is mastered, the demons will lose their power. Mental imagery is the most powerful implement to use to increase levels of performance. Once this is realized, the elephants churning in the waves will shrink to wading shrews.

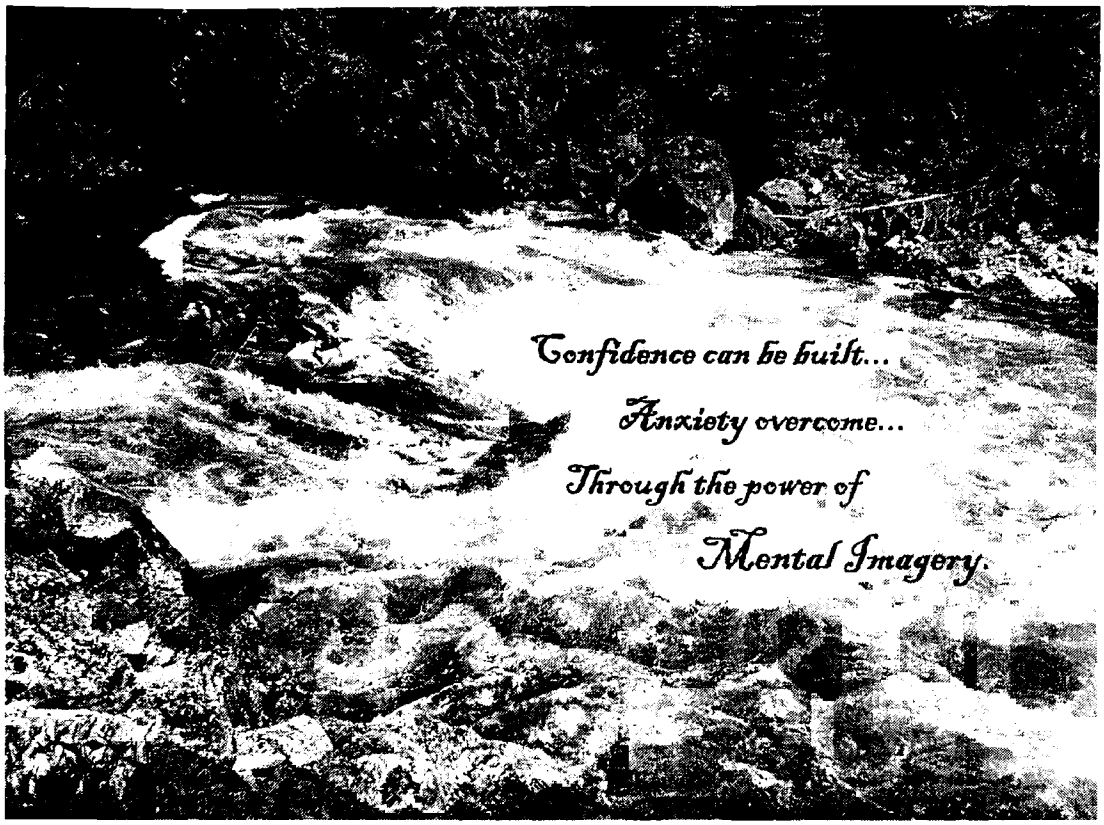

Figure 3. Lochsa Falls, Class IV+, Lochsa River, Idaho, USA

4.2 What is Mental Imagery

Take a moment to think about your last time down a river. What did you see? Can you visualize your success or failure? Can you image the skills you performed? When one reflects in this manner, it is the skill of mental imagery that is used. Imagery is actually a form of simulation. It is similar to a real sensory experience, but the entire experience occurs within the mind (Weinberg & Gould, 1999). By using imagery as a mental training tool, athletes have the capacity to see and believe, which gives them the confidence and focus to perform successfully (Vealey & Greenleaf, 2001).

Mental imagery is a way to plan for a day on the river. Once a rapid is viewed, the rapid's features are taken into account for planning a strategy. In this way, the rafter can create a plan of attack and visualize the successful execution

of this strategy without having previously run the rapid (Vealey & Greenleaf, 2001). Re-creating or creating a successful run will help build confidence (Budney, et. al., 1994). Successful imaging can enhance mental power.

Imagery is a way to create or re-create the experience using all the senses. When you retrospectively reflect, do you remember how your muscles felt? Do you remember the smells or the tastes you experienced? Can you imagine the impending roar of the oncoming rapid? These are all senses that can be incorporated along with the visual image. The more senses one can incorporate in the reflection will aid in the vividness of the image (Vealey & Greenleaf, 2001).

Considering that some rapids are only accessible by river travel, mental imagery is a way to practice a rapid without being on the river. Imagery is so powerful that one can simply imagine running the rapid and the brain interprets these images as identical to the actual external stimulus situation (Vealey & Greenleaf, 2001). Imagining is practice without physically doing it. Have you ever watched someone else guiding a boat down the river? Did you imagine yourself doing the things they did? In this way, you are practicing without being on the river.

Mental imagery is a tool that will help the river runner gain confidence, plan proper routes and reduce anxiety. The power of nature is enormous, but so is the power of the human mind. It is important to use this mental exercise in positive ways. While positive or accurate images enhance subsequent performance, negative or imperfect imagery results in impaired performance (Hall, et. al., 1994). If one has the constant vision of the raft flipping and taking a

nasty swim, this situation is more likely to occur. Negative visions breed doubt, creating anxiety. Considering this, the context of mental imagery herein will promote the positive realm.

4.3 Does Imagery Work

Empirical evidence supports the use of mental imagery in learning and performing skills. Imagery has been proven to aid in the confidence of climbers, route planning for slalom canoeists as well as improving performance for more traditional athletic pursuits (Feltz & Landers, 1983, Jones, et. al., 2002, MacIntyre, et. al., 2002). Imagery has been proven to increase performance in the areas of basketball (Savoy, 1993), golf putting (Beauchamp et. al., 1996), dart throwing (Straub, 1989) and figure skating (Ming & Martin, 1996), just to name a few. There is no question that mental imagery can enhance one's performance but success is not necessarily easy to achieve (Weinberg & Gould, 1999).

Several factors determine the effectiveness of the imagery experience. It will be important to consider these factors to maximize imagery effectiveness (Weinberg & Gould, 2001). Whitewater lends itself to the use of imagery. When scouting a rapid and planning the proper maneuvers, one cannot help but visualize the ensuing events. While scouting, the river runner must "think about what kinds of things might be tried, the consequences of each action can be predicted to some extent based on previous experiences with similar skills, and the performer can perhaps rule out inappropriate courses of action" (Schmidt, 1982, p. 520). Losing to the rapids results in many consequences the least of which can be the temporary discomfort of being dumped into cold water. A proper mental rehearsal

will help the guide make proper decisions before entering the heat of the battle. It is also chillingly understood that an "inappropriate course of action" can also lead to death by drowning.

While imagery can help one plan a proper route, one cannot overlook the importance of practicing whitewater drills appropriate to one's skill and experience level. No amount of imagery will help the beginner take on a Class V rapid. One must attain the skill level needed for certain situations. Imagery can help the beginner advance to novice and novice to expert, but one's skill level must be achieved and applied to like situations.

Skill level must be understood, as should the ability to image. Research indicates that imagery is more effective when individuals are higher in their ability to imagine or image (Weinberg & Gould, 1999). High skill levels in imagery equate to being able to image vividly and with control. As stated above, imagery is a skill and should be practiced to improve ability. While some whitewater books will instruct the reader to "visualize" themselves going through the rapids, it is inappropriate to assume that each guide will possess the same ability level. Just as some people are more athletic than others, some are better imagers.

As stated above, one cannot overlook the importance of practicing the physical skills of whitewater rafting. These skills are the cornerstone to one's career in whitewater. Considering this, it is important to note that mental practice cannot replace physical practice but when used in conjunction with each other, degrees of ability to perform will undoubtedly rise. Wilderness whitewater

situations will often not allow the guide to physically practice a rapid before any given run. Guides will confront such situations without the experience to be confident performing the physical skills. In this scenario, mentally practicing the run and creating a positive image will help the guide increase confidence to tackle the challenge. When such circumstances exist and mental imagery is the only practice available, this preparation can prove quite valuable.

4.4 How Imagery Works

Several theories exist that help to explain how imagery works. These theories are called the psychoneuromuscular theory, symbolic learning theory and bioinformational theory. While technical in nature, knowing the basics of these theories will help the river runner understand imagery which intensifies the educational process.

While floating down the river, the guide must execute certain maneuvers to ensure a safe run. During this time, transmissions between the brain and muscles are in constant flow. These transmissions are what make one's body execute skillful moves and decisions. The psychoneuromuscular theory suggests that similar impulses occur in the brain and muscles when athletes imagine the movements without actually performing them. Thus, the psychoneuromuscular theory asserts that vivid imagined events produce innervations in our muscles similar to that produced by the actual physical execution of the event (Vealey & Greenleaf, 2001). This theory explains why practicing mentally is much better than no practice at all. This theory supports the design of Lesson #4: Perspective Lesson. While the river runner images in both perspectives, innervations are being

produced which will aid in the moves needed to safely maneuver through a rapid. The scouting experience resembles a practice before the performance.

Symbolic learning theory suggests that imagery may function as a coding system to help people understand and acquire movement patterns. That is, one way individuals learn skills is by becoming familiar with what needs to be done to successfully perform them (Weinberg & Gould, 1999). When a novice river runner observes a veteran guide run a rapid, the onlooker notes strategies that led to a successful run. In this way, the beginner creates a blueprint for success. Following this mental blueprint will help the beginner create similar success in the future (Vealey & Greenleaf, 2001). Scouting rapids and imaging a successful run is indeed a way to make a "blueprint." In this way, the river runner notices what is needed to successfully run the rapid and this is ingrained in the head.

Bioinformational theory assumes that a mental image is an organized set of propositions, or characteristics, stored in the brain's long-term memory (Lang, 1977, 1979). When individuals engage in imagery, they activate stimulus characteristics that describe the content of the image for them and response characteristics that describe what their responses are to the stimuli in that situation (Vealey & Greenleaf, 2001). For example, when one imagines conducting a run of extreme rapids, this involves stimulus characteristics such as feel of the oars in the hands, sight of the rapids below and the intensifying roar of the thrashing water. Response characteristics for this image might include muscular tension, feeling of anxiety and seeing the raft flow the proper course. According to bio-informational theory, for imagery to facilitate sport performance, response

characteristics must be activated so they can be modified, improved, and strengthened. By repeatedly accessing response characteristics for a particular stimulus situation and modifying these responses to represent perfect control and execution of a skill, imagery is predicted to enhance performance (Vealey & Greenleaf, 2001).

No matter which academic theory the river runner embraces, the result of familiarizing oneself with mental imagery will be enhanced abilities. The theories suggest subtle differences as to why imagery works, but all agree that it does work. These theories are meant help build the river runners knowledge of imagery. While detailed education of these theories is preferred, mastery of this knowledge is not a pre-requisite to using the skill of imagery.

4.5 Types of Imagery

When someone tells you to visualize the rapids, what do you see? Do you know what perspective you are viewing the scene? There are two different vital perspectives to consider that may aid in scouting rapids. Although basic in nature, simply knowing the differences in these perspectives will help increase the vividness and controllability of the image.

Imagine yourself flowing through a difficult rapid. Imagine yourself pulling on the oars while looking straight into the huge rapid below. You are in the middle of the rapid, consuming the moment, seeing things happen with your own eyes. You are imaging the experience as if being in your body. This is called the "internal perspective." In this way, you are witnessing the experience through your own eyes. In contrast, imagine yourself standing on shore, looking down on

the river. As you stand and watch, you behold yourself guiding the boat through the rapid. Similar to an out-of-body experience, it is like watching yourself flow down the river on a videotape. This is the "external perspective." While these two perspectives are inherently different, both perspectives can be effective in improving levels of performance.

The type of perspective a river runner chooses will be a reflection of personal preference or level of experience. Research has shown that athletes with more experience may choose the internal perspective over the external perspective (Mahoney & Avener, 1977; Orlick & Partington, 1986; Salmon et. al., 1994).

Anecdotal data collected on a recent whitewater training workshop also suggests that veteran guides prefer internal perspective. This data was collected in conjunction with a workshop offered by the University of Montana. The workshop's primary objective was to train students on forms and functions of conducting a safe and enjoyable whitewater rafting trip. Previous to data collection, the students were instructed on the differences between external and internal imagery. This lesson was strategically employed considering there would be many scouting missions deployed. The scouting situation lends itself to using both perspectives. After the day of scouting extreme whitewater, the participants were questioned on which perspective proved most effective. Overwhelmingly, veteran guides used internal perspective. Novice guides felt the external perspective was more effective.

The most important thing when choosing a perspective is to always use the perspective that is most comfortable. Some people have a more difficult time in

imaging with a certain perspective. In this case, exercises to strengthen that particular skill should be practiced. Such exercises are included in the latter portion of this manual.

4.6 Keys to Effective Imagery

Regardless of which perspective is applied, if the image is not vivid or out of control, the image will not be meaningful or useful. Imagery is a skill and must be practiced for improvement. The better one is in imaging, the more senses will be represented (Vealey & Greenleaf, 2001). When more and more senses are used in the imagination, the more vivid the image will be perceived.

Successful imagery is learning to manipulate your images so they do what you want. Many athletes have difficulty controlling their images and often repeat their mistakes (Weinberg & Gould, 1999). A river runner may find it difficult to block out sub-par performances of the past. These negative images will aid in producing future sub-par performances. Even if the individual can produce vivid images, but is unable to control them, the prospects for effective use of imagery techniques are dim (Sheikh, et. al., 1994). With practice, the learner can gain greater control of images while also focusing on positive, vivid images.

The next section of the manual, includes lessons that will help with developing imagery skills. These lessons can be grouped together or used individually. Some can be used alone or with others. When facilitating the lessons, care should be taken to create a relaxed, peaceful environment.

Figure 4. Ground Hog Bar, Main Salmon River, Idaho, USA

4.7 Preparation

Before one commences on a course to build the skill of imagery, it is important to understand your ability to visualize. The following is a sport imagery questionnaire that is used to get a grasp on one's ability. Please be honest when completing the following questionnaire. Failure to be truthful will give the river runner a distorted sense of ability, which may equate to poor reactions and choices during a dangerous river episode.

4.8 Imagery Evaluation

Permission to use this questionnaire was granted by the McGraw-Hill Companies from Jean Williams' book, Applied Sport Psychology, published in 2001 by Mayfield Publishers. The original title is Sport Imagery Evaluation.

As you complete this evaluation, remember that imagery is more than just visualizing something in your mind's eye. Vivid images may include many senses, such as seeing, hearing, feeling, touching, and smelling. Vivid images also may include feeling emotions or moods.

For each general sport situation that follows (practicing alone, practicing with others, performing in a competition, recalling a peak performance), imagine the situation and provide as much detail from your imagination as possible to make the image as real as you can. Then you will be asked to rate your imagery in four areas:

a. How vividly you *saw* or visualized the image.
b. Whether you could see the image from *inside your body.*
c. Whether you could see the image from *outside the body.*
d. How well you could *control* the image.

After you read each sport situation, think of a specific example of it- the skill, the people involved, the place, and the time. Then close your eyes and take a few deep breaths to become as relaxed as you can. Put aside all other thoughts for a moment. Keep your eyes closed as you try to imagine the situation as vividly as you can.

There are, of course, no right or wrong images. Use your imagery skills to create the most vivid and clear image that you can. After you have completed imagining each situation, rate your imagery skills using the following scales.

For items a,b,c:

1 = no image present
2 = not clear or vivid, but a recognizable image
3 = moderately clear and vivid image
4 = clear and vivid image
5 = extremely clear and vivid image

For item d:

1 = no control at all of image
2 = very hard to control
3 = moderate control of image
4 = good control of image
5 = complete control of image

Practicing Alone (general sport situation #1)

Select one specific skill or activity in your sport such as paddling a canoe, rowing a raft, or commanding a paddle team. If you have no such experience, select a past skill that is familiar such as swimming freestyle, throwing a pass or hitting a ball. Now imagine yourself performing this activity at the place where you normally practice (river, lake, pool, field, gym) without anyone else present. Close your eyes for about one minute and try to see yourself at this place, hear the sounds, feel your body perform the movement, and be aware of your state of mind or mood. Try to see yourself from behind your eyes or from inside your body. Then, try to see yourself from outside your body, as if you were watching a videotape of yourself performing.

a.	Rate how well you saw yourself doing the activity.	1	2	3	4	5
b.	Rate how well you were able to see the image from inside you body.	1	2	3	4	5
c.	Rate how well you were able to see the image from outside your body.	1	2	3	4	5
d.	Rate how well you controlled the	1	2	3	4	5

Practicing With Others (general sport situation #2)

You are doing the same activity, but now you are practicing the skill with your instructor and other guides present. This time, however, you make a mistake

that everyone notices. Close your eyes for about one minute to imagine making the error and the situation immediately afterward as vividly as you can. First, try to experience the feelings you have as you make the mistake. Then, quickly try to re-create the situation in your mind and imagine yourself correcting the mistake and performing perfectly. Try to see the image from behind your eyes or from inside your body as you correct the mistake. Next, try to see the image as if you were watching through a video camera as you correct the mistake.

a.	Rate how well you saw yourself doing the activity.	1	2	3	4	5
b.	Rate how well you were able to see the image from inside you body.	1	2	3	4	5
c.	Rate how well you were able to see the image from outside your body.	1	2	3	4	5
d.	Rate how well you controlled the	1	2	3	4	5

Performing in a competition (general sport situation #3)

Imagine yourself performing the same or similar activity in competition, but imagine yourself doing the activity very skillfully and the spectators and teammates showing their appreciation. As you imagine the situation, try to see the crowd and hear the noise they are making. Imagine yourself feeling confident in your ability to perform, as well as your ability to handle the pressure. Now close your eyes for about one minute and imagine this situation as vividly as possible. Try to image yourself performing from inside your body, as if you were actually performing, as well as from outside your body, as if you were a spectator.

a.	Rate how well you saw yourself in this situation.	1	2	3	4	5
b.	Rate how well you were able to see the image from inside your body.	1	2	3	4	5
c.	Rate how well you were able to see	1	2	3	4	5

	the image from outside your body.	
d.	Rate how well you controlled the image.	1 2 3 4 5

Recalling a Peak Performance (general sport situation #4)

Recall one of your all-time best performances- a performance in which you felt confident, in control, in the zone. Close your eyes for about one minute and try to see yourself in that situation, feel your emotions, and re-create the experience. Imagine your performance and re-create the feelings you experienced, both mentally and physically, during that performance. Try to see the image from within yourself, and then try to image the situation from outside yourself.

a.	Rate how well you saw yourself in this situation.	1 2 3 4 5
b.	Rate how well you were able to see the image from inside your body.	1 2 3 4 5
c.	Rate how well you were able to see the image from outside your body.	1 2 3 4 5
d.	Rate how well you controlled the image.	1 2 3 4 5

Scoring

Now let's determine your imagery scores and see what they mean. Sum the ratings for each category and record them below.

Directions	**Dimension**	**Score**
Sum all *a* items	Visual	_____
Sum all *b* items	Internal Perspective	_____
Sum all *c* items	External Perspective	_____
Sum all *d* items	Controllability	_____

Interpret your scores in the visual, auditory, kinesthetic, emotion, and controllability categories based on the following scale: excellent (20-18), good (17-15), average (14-12), fair (11-8), and poor (7-4). Notice the categories in which your scores were low and refer to exercises in this manual to increase your imagery ability in those areas. All of these categories are important for imagery training, so don't just rely on your visual sense. Work to improve the others! Remember, it takes practice but you *can* increase your imagery ability. Good Luck!!

Depending on your score, the lessons in the following section will help you structure an imagery-training regimen. For instance, if your scores are low in controllability, then focus on the related lesson. Even though you may have high scores, the lessons are interesting to engage in and can help with mastery. Nevertheless, the following section includes lessons to enhance your ability to image.

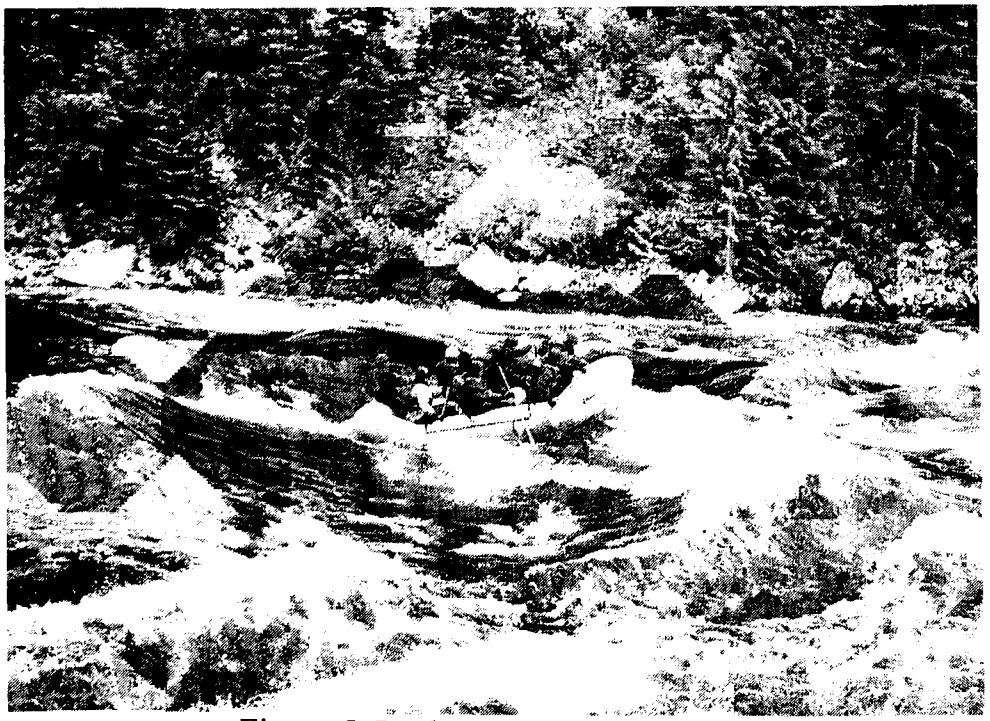

Figure 5. Lochsa River, Idaho, USA

Figure 6. The Kitchen Sink, Class III-IV, Madison River, Montana, USA

4.8 Imagery Lessons

Now that we have determined your level of ability to image, the following section includes lessons that will enhance certain tendencies. The lessons are simple, easy to complete and very powerful. There are five lessons included as follows:

1. **Pre-trip lesson**: This lesson is designed to reduce anxiety and increase confidence for novice rafters getting ready to partake in a whitewater workshop.
2. **Vividness lesson**: Through intense practice of this lesson, increased levels of vividness can be achieved.

3. **Controllability lesson**: This lesson aids to raise levels of awareness of how imagery is being used and how to take control of imagery skills.

4. **Perspective lesson**: This lesson focuses on using external and internal perspectives while scouting river rapids.

5. **Guided Imagery lesson**: This is a basic imagery lesson that is used as a casual experience for relaxation. This lesson is also a good supplement for vividness and controllability lessons.

These lessons are designed to be facilitated by an instructor but with practice can be implemented while alone. Now sit back, relax and prepare to visualize.

Lesson #1 **Pre-Trip Imagery Lesson**

Intro: The following is an imagery lesson that should be used at home or in the classroom previous to leaving for a whitewater workshop.

Content: This lesson consists of a guided imagery that is a preparation for a whitewater workshop.

Instructional Objectives: The student will be able to:

1. Relax and focus on the events of the day ahead.
2. Imagine having a positive performance.
3. Understand the importance of preparing mentally.
4. Follow the prompts of the instructor.

Instructional Procedures: The instructor will:

1. Read the script provided for the imagery lesson.
2. Encourage students to relax.
3. Check student's level of understanding.

Assessment: instructor will pose Questions. Students will be prompted to discuss the experience and describe the level of vividness achieved.

Assessment questions:

Were you able to image the scene?

What senses made the image more vivid?

If you had trouble imaging the scene, can you describe your experiences and the feelings you had?

Materials: All educational portions of this manual should be read previous to lesson. This lesson should be performed in a classroom or other area free from

distractions. This lesson should be implemented at a pre-trip meeting, previous to training exercises on the river.

Imagery Script

Get into a comfortable position and close your eyes. Focus on the center of your body and take several deep breaths. With each inhalation, imagine that your are pulling all of the tension from your body into your lung. With each exhalation, imagine that you are releasing all of your tension and negative thoughts from your body. Continue this focused breathing until your body becomes relaxed and your mind is alert and open for productive thoughts (pause for 30 seconds):

Imagine it is the night before leaving for tomorrow's whitewater rafting trip. You are preparing for the next days activities as well as the week ahead on the river. As you are preparing to go to sleep, you are focusing on feeling calm, confident, and physically and emotionally in control (pause for 10 seconds). You are excited and anticipatory about performing well tomorrow and in the coming week (pause for 10 seconds). You sleep well and awaken feeling rested, excited and focused (pause for 10 seconds). You realize that you are well prepared, both physically and mentally, for the workshop. Physically, you feel balanced and ready. Mentally, you are confident and focused (pause for 10 seconds).

Now imagine that you are at home preparing to leave for the trip (pause for 10 seconds). You take some time to run through a mental warm-up by visualizing meeting the group at the river. You anticipate feeling comfortable with everyone and are focused on creating a team atmosphere (pause for 30 seconds). Now in your mind's eye, focus on the specific goals you have established for the

workshop. Imagine yourself performing perfectly, achieving your goals for the workshop and successfully executing specific river strategies (pause for 60 seconds)

Now imagine yourself arriving at the boat launch, feeling confident in your physical and mental preparation (pause for 20 seconds). You feel the nervous anticipation of running rapids and remind yourself that it is exhilarating to play on the river. You love it (pause for 10 seconds)! Imagine your feelings as you put on your river gear and board the raft (pause for 20 seconds). You feel confident in your preparation and clearly focused on your upcoming week on the river. Your breathing is calm and controlled. Your muscles feel warm and elastic, ready to explode with intensity and precision. You are ready! (pause for 15 seconds). Your pre-trip planning goes well, yet you remind yourself that you are ready for any unexpected problem or obstacle. You are confident in your refocusing ability and remind yourself that you are mentally tough. You feel optimally energized and ready to go (pause for 30 seconds).

Now, when I count to 3, open your eyes and come back to the group when you are ready. As you return to the group, focus on the fun and enjoyment that you will get from the week ahead. Ready...1...2...3...Come back to the group and know that you are ready to get on the river. Enjoy!

(Adapted from Vealey & Greenleaf, 2001, p. 273)

Theme: This is an exercise to enhance vividness of imagery.

Objective(s): The student will be able to

1. Understand the importance of vividness in imagery
2. Improve ability to image vividly

Strategies: The instructor will use scripts (provided) to educate students on vividness. A description of vividness will be provided. The final script will lead the group in a vividness exercise.

Assessment: Students will be asked post-experience questions to evaluate their understanding of the concepts presented as well as questions concerning their imagery performance.

Materials: All educational portions of this manual should be read previous to lesson. The only materials needed for this lesson are the scripts provided. The area of instruction should be free of distractions.

Follow-up Activities: Students will be encouraged to practice vividness exercises daily to increase the ability to image.

Procedure: Read the following: For the following lesson, incorporate as many senses as possible into your imagery so the scene is as clear and realistic as real life itself. Try to create imagery so realistic you believe you are actually executing the skill. Try to include emotional feelings in your images. Refresh your memory constantly by emphasizing specific sensory awareness (e.g. smells, the wind) during training.

Vividness Exercise: Imagining the River

Imagine that you are landing your raft on the bank of a river. Look around and take in all the details. What do you see? Notice the tree line and try and pick out the best place to pitch your tent. Do you see an open and flat location amongst the trees? Now exit the raft and feel the cool water on your feet as you walk up to shore. As you walk up the beach to your campsite, can you smell your surroundings? Smell the moist air of the river bottom. Once you arrive at your preferred camping location, take some time to look around. What is the view like down to the river? Can you hear the flow of the river from this vantage point? Take time to notice the geese that are flying overhead. Do you feel the breeze as you are looking downstream? Now sit back and enjoy the scene.

(Adapted from Weinberg & Gould, 1999, pg. 276)

Lesson #3 Controllability Lesson

Content: The following lesson will focus on controllability of imagery. A key to successful imagery is learning to manipulate your images so they do what you want them to.

Instructional Objectives: The student will be able to:

1. Understand the lesson so as to perform it independently in the future.
2. Use such lessons to enhance controllability
3. Discuss the experience.

Instructional Procedures: The instructor will:

1. Read the script provided for the imagery lesson.
2. Encourage students to relax.
3. Check student's level of understanding.

Setting: This lesson can be performed in classroom or on river situations. Wherever the lesson is implemented, the setting should be free of distractions.

Materials: All educational portions of this manual should be read previous to lesson. The only materials needed for this lesson are the scripts provided. The area of instruction should be free of distractions.

Assessment: The instructor will pose questions following the lesson, checking for understanding and quality of experience. Students will be encouraged to write in journals about experience.

Assessment Questions:

Were you able to control your performance in this visualization?

Were you able to visualize the situation when commanded to?

Did you use various senses to aid in controlling the visualization?

What emotions did you feel during this lesson?

Follow-up Activities: Upon checking for understanding, students will be encouraged to perform exercises independent from the group on a daily basis to increase levels of controllability.

Script: The following script encompasses three different situations. After each component, open the class for discussion of the experience.

Controllability Exercises

1. Controlling Performance
    i. Imagine working on a specific rowing or paddling technique that has given you trouble in the past. This could include un-successful runs of rapids. Take careful notice of what you were

doing wrong. Now imagine yourself performing that skill perfectly while seeing and feeling your movements. For example, feel a strong paddle stroke that instantly corrects the raft's path resulting in a successful run.

2. Controlling Performance against a Class V rapid.

   ii. Picture yourself scouting a tough, class IV/V rapid that you have seen before. Try to visualize a route that will produce a clean run. Imagine situations in which you effortlessly paddle through the rapid. Make sure you control all aspects of your movements as well as the decisions you make. Imagine losing control for a moment but with a clear, calm head, you bring the raft back on track.

3. Controlling Emotions

   iii. Picture yourself in a situation where you tense up, become angry, lose concentration, or lose confidence (e.g., flipping a raft, swimming in cold water, feeling stressed by the weather). Recreate the situation, especially the feelings that accompany it. Feel the anxiety, for example, of feeling your raft go over in a violent class V rapid. Then use deep breaths to feel the tension drain from your body and to instead focus on what you need to do to execute the skills. Try to control what you see, hear, and feel in your imagery on the river.

(Adapted from Vealey & Greenleaf, 2001, pg. 260)

Figure 7. Scouting Salmon Falls, Main Salmon River, Idaho, USA.

Lesson #4 **Perspective Lesson**

Content: This is an on-river experience with focus placed on using internal and external perspectives of imagery.

Prerequisites: The section of this manual concerning imagery perspectives should be reviewed and studied previous to this lesson. Students should understand the importance of scouting rapids previous to this lesson. It may be necessary to lead the class through a progressive relaxation previous to the imagery experience.

Instructional Objectives: The students will be able to:

1. Display understanding of internal and external perspectives.
2. Use both perspectives when scouting rivers.
3. Use imagery to enhance the scouting experience.

4. Decide which technique works best.

5. Practice both perspectives throughout the day when scouting missions are deployed.

Instructional Procedures: The instructor will:

1. Educate the class on external and internal perspectives of imagery.
2. Encourage students to use both perspectives when scouting rapids.
3. Prompt students to focus on each perspective individually.
4. Show enthusiasm for the topic and the importance of imagery.
5. Follow-up with students to check understanding of the topic.

Materials: All educational portions of this manual should be read previous to lesson. Use this resource to educate the class on external and internal imagery. The area of instruction should be free of distractions. Binoculars may aid in noticing certain features of the river while scouting.

Safety: Always be extremely careful when walking across shore when scouting. The need to walk on slippery rocks may exist and caution should be taken.

Assessment: After a day on the river, students will be asked questions related to their scouting experience with imagery. Students will be prompted to record their experiences in a journal. Students will be required to spend one half hour writing in journals.

Follow-up Activities: Students will be encouraged to use external and internal perspectives in future experiences on the river. Students will be reminded that imagery is a skill and must be practiced. Students will be encouraged to practice daily to enhance vividness in both perspectives.

(Lesson #4 written and designed by Myers, 2004)

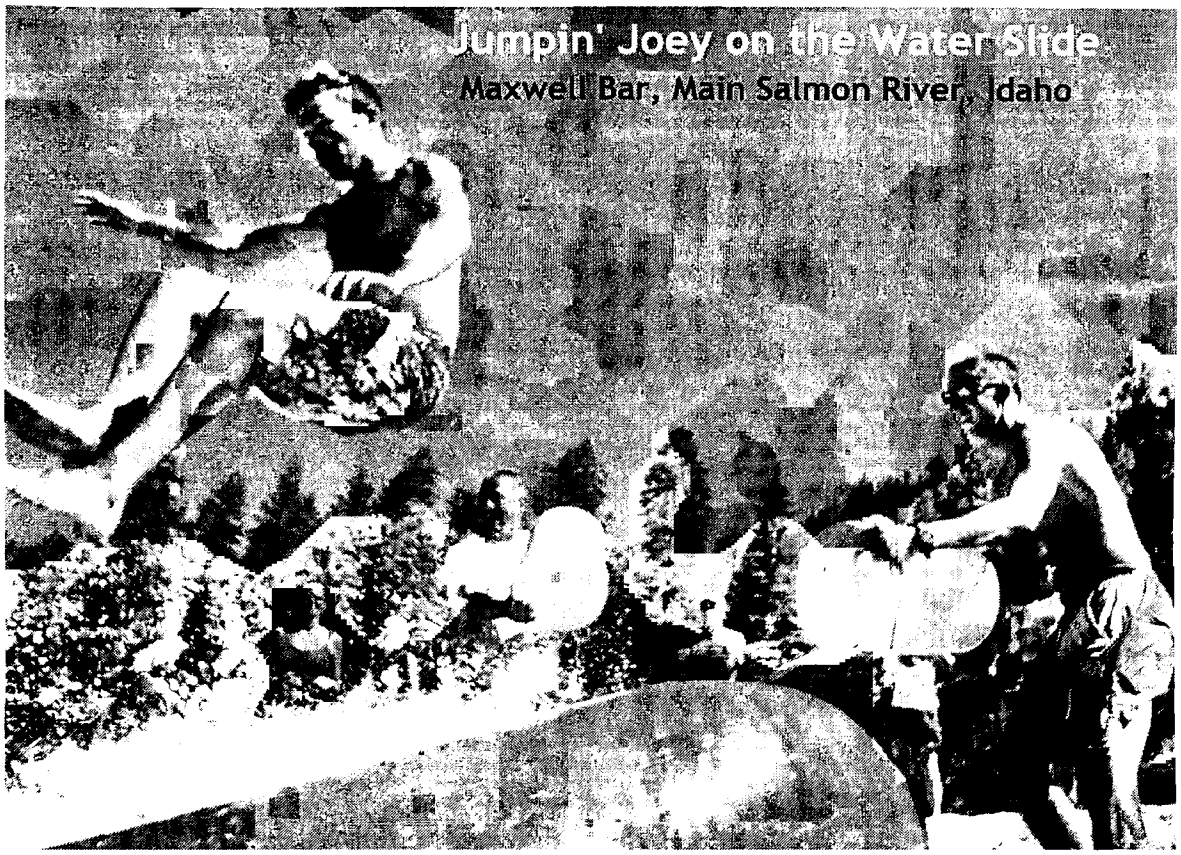

Figure 8. Fun on the Salmon River, Main Salmon River, Idaho, USA

Lesson #5 **Guided Imagery Lesson**

Description: This is a lesson that is designed to convey images customary to a day on the river. River guides will benefit from the experience by developing clearer images of a complete river trip.This is simply a practice session.

Objectives: The student will be able to:

1. Relax and visualize a day on the river.
2. Attain higher levels of vividness and control.
3. Express understanding of the experience.

Teaching objectives: The instructor will:

1. Give clear instructions.
2. Show enthusiasm for the topic.

3. Help students with understanding of the importance of imagery.

Strategies: Ask students to assume a comfortable position and free the area of distractions such as light or noise. Read the following script and facilitate discussion on the experience.

Materials: The only material needed is the script provided. The area of instruction should be free of distractions.

Instructions: Read the following: For the following lesson, incorporate as many senses as possible into your imagery so the scene is as clear and realistic as real life itself. Try to create imagery so realistic you believe you are actually executing the skill. Try to include emotional feelings in your images. Refresh your memory constantly by emphasizing specific sensory awareness (e.g. smells, the wind) during training.

Script: Now that you have assumed a comfortable position, I would like for you to close your eyes and take some full, deep breaths. Feel the air as it flows through your nostrils and enters your check cavity. Also, feel the flow of air over your lips, tongue and throat. As you breathe out you can feel any stress or anxiety leave your body. For the next 30 seconds, I would like you to concentrate on breathing and freeing your body and mind of stress. (pause 30 seconds).

Now come back to me and let's go on a daylong wilderness river trip. As we image the experience, it is important continue to breath and relax and use all your senses to visualize the experience (pause 10 seconds).

As you wake up, you notice the light sound of rain as it falls on the tin roof of the log cabin. Your plans are to float a challenging wilderness river today.

The impending challenge has sparked some fear, but this is only normal for such an undertaking. You possess the skills and know you can achieve success. As you lay in bed, you hope for better weather, but as you peek out the window, a full, steady flow of rain falls on the pine trees just outside. You have thoughts of canceling the trip, but your love of whitewater overpowers those pessimistic emotions. You rise from bed and feel positive that the weather will not ruin your day. You are confident (Pause 10 seconds).

When you arrive at the meeting sight, you notice many familiar faces. Your best friends arrive, smiling with excitement over the impending river run. As you greet everyone, familiar hand shakes and high-fives help you feel comfortable and elated that you are in such supportive company. This comfort shields the rain from destroying your positive attitude. You notice the array of kayaks and rafts that adorn the vehicles of the group. You can taste the adrenaline as you try to picture the rapids of the day. The group meets and decisions are made concerning the excursion. You feel confident of the trip leader and all of the other compatriots. Everyone boards their vehicles and commences the drive to the put-in (pause 10 seconds).

The ride to the put-in can be treacherous, but you are a passenger and feel trust in your driver. Hemlock and spruce trees line the road which produces a moist, pine smell as familiar as a freshly cut Christmas tree. A gentle waft of burning wood reminds you of the campground that is hidden in a nearby stand of timber. Rocks and potholes jar the truck as you try to compensate your body position as to ease the pounding on the vehicle. You come to several places on the

single lane dirt road that produce views beautiful snow covered mountain peaks. The vehicle comes to several spots on the road that has sheer drop offs that produce your first view of the river. You notice a few significant rapids below as the sun breaks through the rain clouds and glistens against the clear water. The ride begins to feel long, but you finally arrive at the put-in (pause 10 seconds).

The put-in scene proves quite hectic. Kayaks of multiple colors are flung from the tops of trucks and you notice the sharp pitch of the electric pumps blowing up the rafts. Your muscles tense as you help carry coolers, dry bags and rafts to the riverbanks. The current seems quite fast as it flows past the excited group. Sun mixes with occasional showers as you put on your wetsuit and dry-top. Your dry-top and helmet shield you from any discomfort the rain may provide. You listen as the appointed trip leader goes over last minute safety instructions and your mind races a bit after being reminded that there are huge hazards on the river and everyone must fully concentrate for a successful run. As your anxiety begins to build you remind yourself to keep taking deep breaths for relaxation. Take deep breaths and visualize the scene at the put-in (pause 30 seconds).

The boat that you choose to board is a fourteen-foot rubber raft. You look around the raft and notice five of your other friends that are eager to tackle the day's whitewater challenges. You can't help but wonder if everyone else is feeling some anxiety but you trust that everyone has a quiet confidence. When the boat leaves shore, your mind is focused, exited, and confident (pause 10 seconds).

The first rapid is the most difficult of the day. As you approach the rapid below, your guide informs the group that there is no place to scout the rapid and is a read-and-run situation. You wonder what will happen but trust the experience of your guide and other paddlers in the raft. The roar of the churning water drowns out some commands that are blurted out by the trip leader. Your instincts provide you with guidance. You feel the paddle strokes of the other paddlers and try to match their force and pace. The raft finally drops into the rapid and completely covers you and the crew with cold water. The cold blast is a shock but you remember that your river clothes adequately shield your body and the chill fades instantly. Your paddle strokes become stronger and quicker as the descent continues. The raft is finally flushed into a calm pool below and your density evolves to elation of the successful run. You beat the rapid and you gain more confidence. You are eager to hit more rapids for the day. (pause 10 seconds).

The floating feeling comforts you as you become even more relaxed. There are no thoughts other than noticing the huge cedar trees that line the banks of the river. Moss grows thick on the rocks around the river and you notice the emerald green contrast against the dirty, muddy banks. Birds emerge from the branches of trees as they feed on the huge hatch of mayflies that flutter above the river. You watch as an osprey swoops down and snatches a fish for the day's meal. You find yourself wondering what animals are looking down on the group today. You hope to see a bear but realize this is an uncommon occurrence. All of a sudden, your serene scene is disrupted by the commands of the trip leader. Another significant rapid is approaching (pause 10 seconds).

This time the rapid is scoutable. You feel some relief that you will be able to view the rapids characteristics before the run. As you walk along the rocky beach you take care with every step, ensuring that no injury will occur. The bottoms of your river shoes are not very sturdy and you feel the sharpness of the rocks sting the ball of your foot and stretch your toes. You try to watch each step but your intense curiosity of the rapid changes your focus back and forth from feet to river. You arrive at the scouting site and relax as you notice the rapids features (pause 10 seconds).

There is only one way to go through this rapid. You notice a huge boulder that the water violently focuses against producing a wave that resembles a ten-foot curl. The water below the boulder produces a familiar hole that has the potential in sucking an entire raft under water. The chute to run is between the boulder and the riverbank and is not very wide. You hear some unfamiliar chatter up stream and you notice another group that is about to flow through the rapid. You wonder why they didn't take the time to scout the rapid but you notice that they look experienced and on the correct line of entry. You witness their successful run, which aids in your confidence. As you scout the rapid, you image yourself and the rest of your group paddling with confidence and executing the proper strokes and moves. You continue to image until you are successfully past the boulder in the quiet pool below. You notice that the run has produced some tension and you remind yourself of the importance of breathing while in the heat of the battle. Take some time to visualize this rapid while taking deep breaths. You feel relaxed and confident (pause for 30 seconds).

The rest of the day produces thrills of whitewater mixed with the beauty of nature. You make sure that the images remain vivid of the birds that you see so you can check their identification once back home. One time when the raft is pulled over to shore, you marvel at the thickness and softness of the moss-like growth on the rocks. Out of the corner of your eye you spy a fish that rises and eats a floating bug. You are completely in tune to yourself and relaxed. Being so close to nature allows you to block out any thought of work or the real world. Take this time to relax and think about what a wonderful day you have had on the river (pause 30 seconds).

The trip leader informs the group that the take-out is approaching. A bridge appears downstream that confirms his suggestion. A feeling of sadness comes across your mind as you wish the trip could last longer. You relish the feeling of flowing on rivers and wish you could do it forever. You joke with the others that the group could choose to not take out but keep floating to the ocean. Reality is understood and your sadness converts to thankfulness that you had the opportunity to float such a beautiful river. You remind yourself that the river will be there tomorrow, next week and next year, which allows you to image future endeavors. Once on shore you take a moment to relax and reflect on the days activities (pause 60 seconds).

After all the rafts and kayaks are loaded, the group gathers to relish the weather that has evolved. What was once a rainy, gloomy day has changed for the better. Blue skies and white fluffy clouds are the backdrop now. The sun bakes the group of tired paddlers as they wait for vehicles to arrive. Cold beverages are

shared and your group gathers as you make a toast to the river. Your confidence has been confirmed and strengthened. You knew you could do it and that is what happened. This increases your overall confidence of river running. Now visualize yourself driving from the river and heading for home. You wish you weren't leaving but are so glad for the experience (pause for 10 seconds).

Now as you leave the river I would like for you to come back to the present moment in this class. When you feel comfortable, open you eyes and acknowledge where you are. Take a moment to breath and become accustomed to your current surroundings. Thank you for coming on the river with me today and I hope you will take more journeys such as this in the future.

(Lesson #5 written and designed by Myers, 2004)

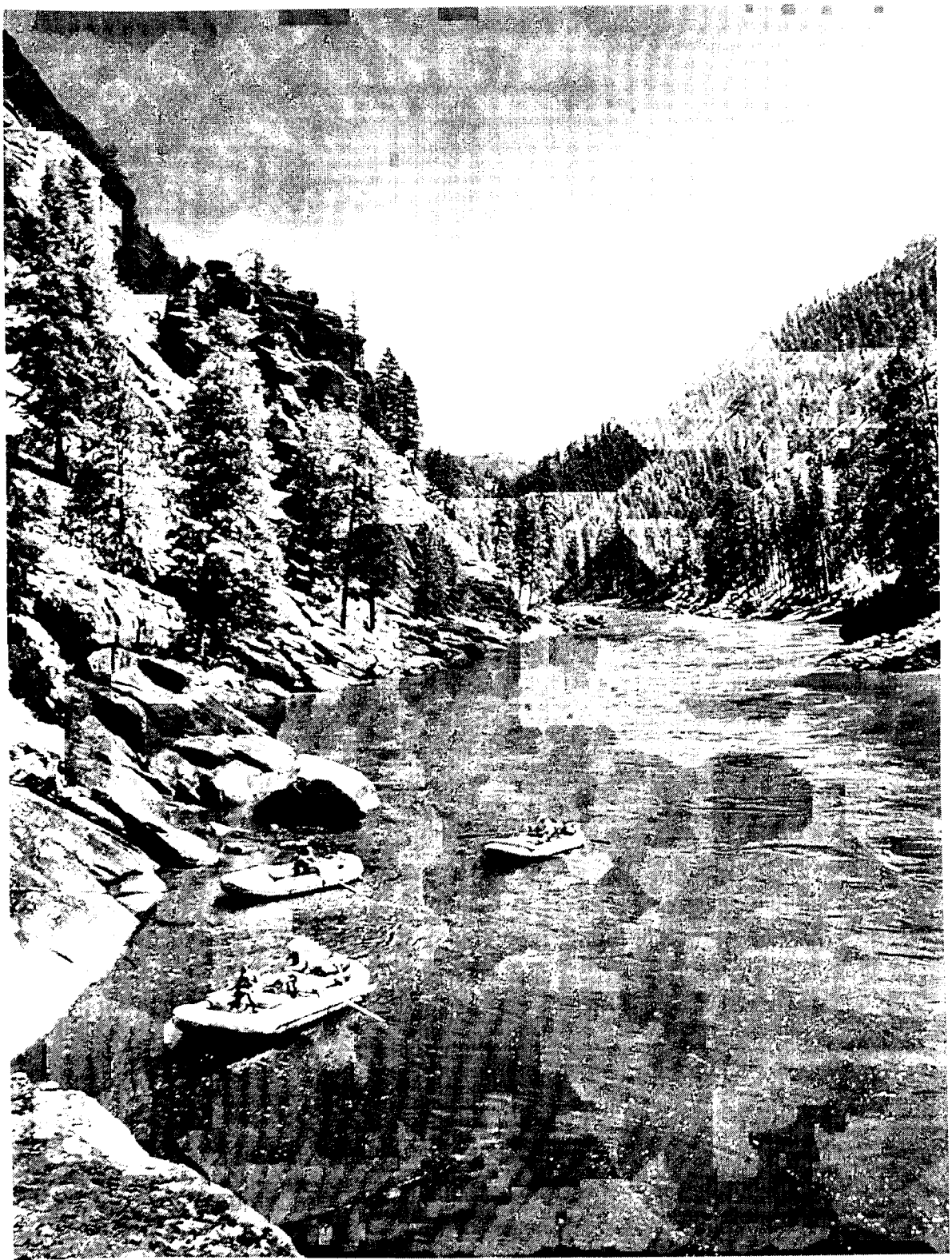

Figure 9. Ferrying out before Salmon Falls, Main Salmon River, Idaho, USA

Chapter Five

Summary and Recommendations

5.1 Summary

This manual's purpose is to introduce the river runner on the subject of mental imagery in order to enhance its use. The manual also includes a method of evaluating imagery ability and lessons to strengthen such skills. Take this manual and embrace the skill of positive mental imagery. Once mastered, this skill may be used in many other facets of life. For this mastery to occur, one must practice and seek out other opportunities to use imagery. Practice by yourself or with others. Check your local university for offerings in performance psychology. Becoming more aware of imagery's use and visualizing positive images of performance will not only aid you on the river, but also when you confront a variety of challenges in life. Staying positive is contagious. This is a mental condition worth spreading.

5.2 Recommendations

Through anecdotal research conducted in relation to this project, the perspective lesson (pg. 24) seemed effective for helping river runners differentiate external and internal perspectives. More official research should be conducted on the use of these separate perspectives. Further research would help explain what perspectives expert and novice guides are using as well as how effective imagery's use can be. Research undertaken in this way will also strengthen the body of knowledge with imagery's use in recreational activities.

Through research of different outfitting organizations, the author discovered that performance psychology issues are rarely discussed. It is suggested that the whitewater community embrace these principles. The physical and mental skill needed in rafting is not unlike that of an athlete. Considering this, future considerations may include other principles of performance psychology as ways to increase performance on rivers.

5.3 Suggested Readings

The following is a collection of resources that are worth pursuing. This collection represents a basic list of books related to imagery and whitewater.

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Bennett, J. (1996). *The Complete Whitewater Rafter.* Camden, ME: Ragged Mountain Press.

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Vealey, R.S., & Greenleaf, C.A. (2001). Seeing is believing: Understanding and using imagery in sport. In J.M. Williams (Ed.), *Applied Sport Psychology: Personal growth to peak performance (4 ed.).* Mountain View, CA: Mayfield.

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Figure 10. Salmon Falls, Main Salmon River, Idaho, USA.

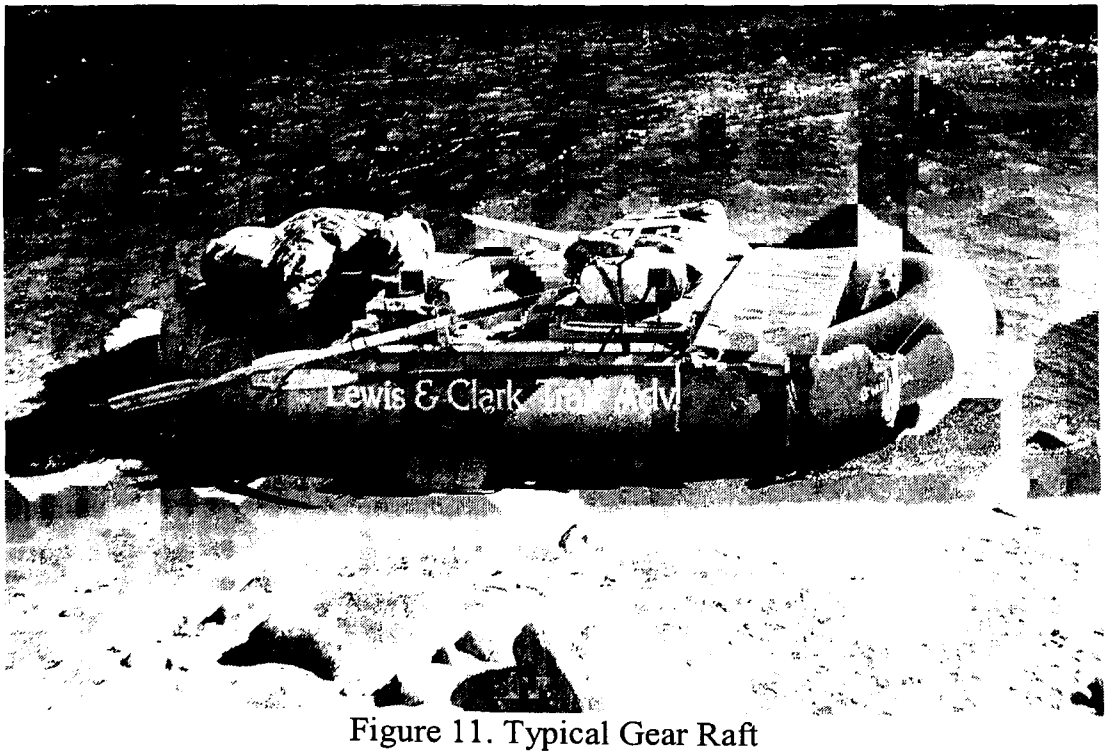

Figure 11. Typical Gear Raft

5.4 About the Author

For the past 10 years, Craig Myers has considered Missoula, Montana his home. Through extensive experience as a river guide and physical education teacher, this project was driven. He received his undergraduate degree from Miami University, Oxford, Ohio and recently completed his Master's from the University of Montana. Craig's favorite days are spent floating the rivers of Montana and Idaho on either whitewater or fishing excursions. He considers his friends and family his greatest assets and gives them much credit for his development. Upon completion of this project, Craig will embark on a teaching adventure in Berlin, Germany. If you would like further information or would like to contact the author, please contact him at coach_myers@hotmail.com

Figure 12. University of Montana Grizscape Float, Lochsa River, Idaho, USA

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Appendix A

River Imagery Questionnaire

Introduction

The following questions are related to your experience with mental imagery as presented in HHP 134: Fundamentals of Whitewater Rafting. Reflect on your

experience and answer with candid detail. Thank you for your time and cooperation.

Questions

1. Have you used Mental Imagery or Visualization previous to your experience in HHP 134: Fundamentals of Whitewater Rafting?

2. If so, where? when? why?

3. Did the lesson in mental imagery enhance your understanding of external and internal imagery?

4. Previous to this class, did you find it difficult to properly read rapids?

5. Did the lesson aid your performance in rapids?

6. Did the lesson increase your confidence in rapids?

7. If you used imagery in the past for visualizing rapids, did the lesson make it easier to image?

8. How did you feel about the lesson?

9. Did you feel like the lesson was an important aid in your learning scouting skills?

10. Do you feel like mental imagery is an important skill to learn in whitewater rafting?

11. Do you feel like you are skilled in mental imagery?

12. Was this as a result of the lesson in HHP 134?

13. Do you feel like this lesson should be incorporated in future classes?

14. Do you have further comments related to the topic of mental imagery?

(Written by Myers, 2004)